

Appendix F

RESOURCES

Comprehensive Guides

The following guides are far more detailed than this Energy Strategy can be. Any city that plans to address energy and climate issues is encouraged to review these documents to see what they offer, and to use them as reference documents as appropriate.

★★★★ **California Local Energy Efficiency Program** (California Leep) This program was developed in 2004 to help local governments design and implement effective energy efficiency strategies in their communities. The comprehensive documentation includes workbooks and practical decision-making tools, as well as all the results of research, stakeholder engagement and pilot projects.

<http://www.caleep.com/default.htm>

★★★★ **Climate Protection Manual for Cities** Natural Capital Solutions and ICLEI produced this well-organized and well-written guide, which offers a wealth of information and links to further resources. It is highly recommended for staff and elected officials involved with energy, water, waste and climate issues. It provides helpful information on how to conduct a baseline emissions inventory, adopt an emissions reduction goal, develop a local action plan, and measure and verify results. Chapters on municipal buildings, infrastructure, transportation, waste reduction and recycling, purchasing and municipal utilities provide a clear overview on the issues and options. Numerous case studies provide data on the costs, benefits and impact of specific measures adopted by ICLEI cities nationwide.

Long-term initiatives like urban planning and fuel transitioning are also covered, and dozens of case studies detail the impact of environmental programs for businesses and individuals.

<http://www.natcapsolutions.org/ClimateManual/REVIEW/>.

★★★ **Monterey Bay Regional Energy Plan** The Associated Monterey Bay Area Governments (AMBAG) published a regional energy plan in 2006. Part I sets out the goals and action plan in the following areas: energy information and education; energy conservation and efficiency; clean renewable and distributed generation resources and transportation energy.

<http://www.ccag.ca.gov/pdf/USTF/docs/AMBAGPartIIFINAL11April06.pdf>. Part 2 describes local actions that have already taken (and their results), calculates the amount of energy efficiency potential by sector and end use, then identifies the most cost-effective measures in each sector. Detailed calculations on the cost per kilowatt hour for specific measures (e.g. T8 fluorescent bulbs, refrigeration, chillers) are included.

<http://www.ccag.ca.gov/pdf/USTF/docs/AMBAGAppendicesApr06.pdf>. The Appendices list existing energy efficiency programs, energy elements in General Plans, and brief explanations of more than 100 energy-saving measures available for businesses and residents.

★★ **Energy and Environment Best Practices** The US Conference of Mayors compiled an extensive list of best practices, most of which provide data on the cost, savings and payback period. The information is loosely organized under the headings of municipal buildings, facilities and operations; air quality; climate change; energy sources; fuels, vehicles and transit; housing and “other.” Within those areas, the case studies are organized by city, then by project.

<http://www.usmayors.org/climateprotection/AtlantaEESummitCDROMVersion.pdf>.

Topic-Specific Resources

The resources in this Appendix are listed under the following categories:

Action Plans

Alternative Energy

Climate Protection

Education

Energy Efficiency

Funding/Financing Sources

Green Building

Industry-Specific

Jobs

Materials

Ordinances & Policies

Organizations

Purchasing

Waste Management

Action Plans

CLIMATE PROTECTION

Marin County Marin completed its greenhouse gas emissions inventory and set a target of 15-20 percent reduction of government emissions and 15 percent countywide by 2020. Specific reduction measures are identified in the areas of building energy use, transportation, waste management and land use; the estimated CO₂ impact is included in the plan, but not the financial impact. Appendix B lists sample reduction measures suitable for cities.

http://egovwebprd.marinpublic.com/depts/CD/main/pdf/final_ghg_red_plan.pdf.

San Francisco Climate Action Plan San Francisco's plan, completed in 2004, sets the goal of reducing greenhouse gas emissions by 20 percent below 1990 levels by 2012. (For references, the Kyoto Protocol targets a seven percent reduction in the same timeframe, or one-third as much. Actions are categorized under transportation, energy efficiency, renewable energy and solid waste, are community-wide in scope and are thoughtful and well-researched.

www.sfenvironment.com/aboutus/energy/cap.pdf

Cambridge MA Cambridge has completed its greenhouse gas emissions inventory and set a goal of reducing greenhouse gas emissions to 20% below the 1990 baseline (no year identified). The key strategies are fuel switching, energy efficiency and waste reduction. Actions are specified in the areas of energy, transportation, land use, buildings and vegetation management and waste management. Recommended actions are listed by timeframe in the document and by sector in the Appendix.
http://www.cambridgema.gov/~CDD/et/env/clim_plan/clim_plan_full.pdf.

ENERGY

California Energy Action Plan II The state Public Utilities Commission and the California Energy Commission issued this plan in 2005, updating the state's coordinated implementation plan for energy policies. The prioritized order to meet the state's energy needs is as follows: (1) energy efficiency and demand response; (2) renewable power and distributed generation; (3) clean and efficient fossil-fired plants as needed, and (4) grid upgrades to support both new demand and new power generation centers. http://www.energy.ca.gov/energy_action_plan/2005-09-21_EAP2_FINAL.PDF (24 pages)

Monterey Bay Regional Energy Plan The Associated Monterey Bay Area Governments (AMBAG) issued a comprehensive energy strategy in 2006. See entry above in Comprehensive Guides.

San Diego Energy 2030 San Diego's Regional Energy Plan was developed by the San Diego Association of Governments (SANDAG) Energy Working Group in 2003. The four focus areas include: (1) energy planning, policy, consensus building and implementation; (2) unified legislative and regulatory advocacy with the state and federal governments; (3) coordination with Mexico, and (4) evaluating the Regional Energy Strategy implementation efforts.
http://www.sdenergy.org/uploads/Regional_Energy_Strategy_Final_07_16_03.pdf (98 pages)

San Francisco Electricity Resource Plan The San Francisco Public Utilities Commission and the Department of the Environment developed this plan in 2002, driven by an imperative to close the highly-polluting Hunters Point power plant. It outlines actions for energy efficiency and increasing the percentage of renewable energy through 2030.
<http://www.sfenvironment.com/aboutus/energy/resource-plan.pdf> (91 pages)

Alternative Energy

BIOGAS

FUEL CELLS

SOLAR ELECTRIC (Photo voltaics, PVs)

For affordable housing **GRID Alternatives** is a nonprofit that provides energy efficiency and renewable energy services, equipment and training under its Solar Affordable Housing Program. They work with local governments (including San Mateo County and San Francisco's Department of the Environment) and nonprofits such as Habitat for Humanity to design and install solar systems for low-income households. <http://www.gridalternatives.org/>.

Purchasing See Purchasing > Solar systems

Solar Estimator An easy-to-use, web-based tool provides an estimate on the size, effectiveness and cost of a solar system, based on the location and electricity bills of a home or business. Other good information for consumers is also on the site related to financing, return on investment for home energy efficiency projects and more. More info at: <http://www.findsolar.com/index.php?page=rightforme>

Installers A searchable database of accredited installers and related professionals.

Database at: <http://www.findsolar.com/index.php?page=findacontractor>

Consumer Energy Center The California Energy Commission offers tips on energy efficiency, rebates, alternative energy and transportation choices for consumers. <http://www.consumerenergycenter.org/>

SOLAR THERMAL (solar water)

Climate Protection

AUDIT/INVENTORY

For Businesses

California's **Climate Action Registry (CAR)** is a voluntary registry for greenhouse gas emissions, established by the California Legislature to help businesses and other entities establish and record their baseline emission levels. Voluntary reductions are encouraged, and the state has pledged to try and

ensure that reporting entities will get credit for past reductions against any future emission reduction requirements. Info about the Protocol is at <http://www.climateregistry.org/docs/PROTOCOLS/GRP%20V2-March2007.pdf>.

Members of the EPA's Climate Leaders program can receive guidance and technical assistance on conducting inventories. <http://www.epa.gov/stateply/resources/reporting.html#imp>

For Cities

The **Climate Action Registry** is open to cities as well as companies. See the entry above under Businesses.

ICLEI provides its members with access to greenhouse gas emissions inventory software developed by Torrie Smith & Associates; it's \$2000 for non-members. More info and a demo version is available at <http://www.torriesmith.com/index.html>

Sustainable Silicon Valley provides a simple CO₂ Emissions Reporting Tool on its website at no charge; an account is required. http://cf.valleywater.org/_ssv/. A table with carbon conversion factors based on the local energy mix is on p. 7 of a document titled "CO₂ Emissions and Reporting Protocol, : available at <http://www.sustainablesiliconvalley.org/>.

The EPA's **Waste Reduction Model (WARM)** software is available free of charge to help waste managers reduce emissions caused by waste management practices. http://epa.gov/climatechange/wycd/waste/calculators/Warm_home.html

For Individuals

The EPA offers an online tool to calculate the emissions produced, based on the lifestyle of an individual or household. http://epa.gov/climatechange/emissions/ind_calculator.html

Many other calculators are provided by companies and organizations offering carbon offset programs, such as the Cool It! Campaign by the Sierra Club. <http://www.cool-it.us/index.php?refer=acterra>

Software

A demonstration version of the Climate Action Registry Reporting Online Tool (CARROT) is at <http://www.climateregistry.org/CARROT/Demo/Index.htm>.

Access to ICLEI's Clean Air and Climate Protection (CACP) software is one of the benefits of membership.

LEGISLATION AND REGULATION

AB 32 The 2006 landmark legislation establishes a cap on greenhouse gas emissions, enables the introduction of a market-based (cap and trade) system and sets aggressive deadlines for the California Air Resources Board to identify, implement and enforce regulations to achieve the targets. More info is at <http://www.arb.ca.gov/cc/factsheets/ab32factsheet.pdf>; the text of the bill is at <http://www.arb.ca.gov/cc/docs/ab32text.pdf>.

SB1 The Million Solar Roofs law expands the California Solar Initiative (CSI) developed by the California Public Utilities Commission. The goal of CSI is to dramatically expand the amount of clean energy generated by solar panels on homes and businesses by providing long-term incentive funding, letting solar customers "sell" their excess energy back to utilities for credit and requiring new home builders to offer solar as an option as of 2011. <http://gov.ca.gov/index.php?/press-release/3588/>

LOCAL ORGANIZATIONS & PROJECTS

Business Council on Climate Change (BC3) Sponsored by the UN Global Compact, the San Francisco Department of the Environment and the Bay Area Council, this coalition plans to offer support and tools to businesses ready to reduce their carbon footprint. <http://www.bc3.cc>

Joint Policy Committee of ABAG, BAAQMD, BCDC, MTC issued a report in May, recommending that Climate Protection Task Force be formed to address mitigation and adaptation. See http://www.abag.ca.gov/jointpolicy/jpc_climate_change.htm for more info.

Joint Venture Silicon Valley Network (JVSVN) Joint Venture analyzes and takes action on issues affecting the economic vitality and quality of life of the region. It has started a Climate Protection Task Force of senior city staffers in San Mateo, Santa Clara and southern Alameda Counties; the task force will work collaboratively to analyze and specify climate protection solutions. The goal is to lower costs and speed up deployment of programs and technologies to reduce greenhouse gas emissions in the area. <http://www.jointventure.org/index.html>

Silicon Valley Leadership Group (SVLG) SVLG convenes business and government leaders to address policy issues affecting the quality of life and economic health of the region. The Clean and Green Energy Action plan includes multiple initiatives to lower the region's greenhouse gas emissions, such as the "Cool Commutes" competition for local employers, advocacy for improved transit options, demonstration projects and a green building initiative for cities. <http://www.svlg.net/campaigns/cleanandgreen/>

Sustainable Silicon Valley (SSV) Started in 2001 by the Silicon Valley Leadership Group, California EPA and environmental nonprofits, SSV urges its members from the business, governmental and nonprofit sectors to reduce their CO₂ emissions 20 percent below 1990 levels by 2010. SSV sponsors educational and information-sharing forums and publishes a report of its members' emissions reductions. Educational forum materials are available in the Archives section of the site. Annual membership fees are \$1000 for cities. San Mateo County, Portola Valley and the City of San Mateo are members of SSV. <http://www.sustainablesiliconvalley.org/>

NATIONAL / INTERNATIONAL ORGANIZATIONS & PROJECTS

ICLEI--Local Governments for Sustainability ICLEI is an international nonprofit that has focused on sustainable development and climate protection for over 10 years. It offers technical services, consulting, training, emissions inventory software and a network of almost 500 cities across the globe that share information and experiences. Membership fees are on a sliding scale based on a city's population, either \$600 to \$1200 for cities in San Mateo County. Dozens of local Bay Area cities are members of ICLEI. <http://www.iclei.org/index.php?id=391> (US office, based in Oakland).

US Mayors Agreement on Climate Protection <http://www.usmayors.org/climateprotection/>

Sierra Club Cool Cities The Cool Cities program is aligned with the US Mayors Climate Protection Agreement. The three common strategies are green vehicle fleets, energy efficiency and renewable energy. San Mateo, San Bruno and several other Bay Area cities have signed up. <http://www.coolcities.us/>^[t1].

Education

PROFESSIONAL TRAINING

ABAG Energy Watch The joint project of ABAG and PG&E offers workshops for local government personnel on an as-needed basis. Past workshops have addressed lighting and how to get started on implementing an energy efficiency project. More info at: <http://www.abag.ca.gov/abagenergywatch/events.html>

BOMA This association of building owners and managers offers both online and in-person training as part of its energy-efficiency program for offices and high rise buildings. <http://www.boma.org/TrainingAndEducation/BEEP/>.

Build It Green (BIG) The Bay-Area based nonprofit offers training and certification classes for green building professionals (engineers, real estate professionals, etc.), as well as for inspectors certifying homes under its Green Point Rated program. (See BIG under Organizations). More info at: http://www.builditgreen.org/guild/index.cfm?fuseaction=become_pro (green building professionals) and <http://www.builditgreen.org/registration/index.cfm?fuseaction=homeraters> (Green Point Raters)

PG&E Pacific Energy Center (PEC) The PEC offers excellent, free classes for professional architects, engineers, facility operators, electricians and others, with classes concentrated in the spring and fall. The majority are given at the San Francisco facility, though an increasing number are offered in other locations and via the web. More info at: <http://www.pge.com/pec>

Sustainable Silicon Valley (SSV) SSV is a nonprofit with the goal of reducing regional carbon dioxide emissions 20% below 1990 levels by 2010. It offers quarterly educational programs on topics of interest to its pledging partners in the business, government and nonprofit sectors and to the general public, and posts the materials online in its Archives section. More info at <http://www.sustainablesiliconvalley.org/> (check the Calendar tab for upcoming programs and the Archives tab for material from past programs).

PUBLIC EDUCATION & OUTREACH

Brown bags The County's RecycleWorks sponsors monthly brown bag luncheon programs on environmental issues of interest to the public. Listings are at http://www.recycleworks.org/sustainability/brownbag_lecture.html.

Footprint/ carbon calculators Many online calculators now exist to help businesses and individuals quantify the environmental impact of their purchases and activities. The original Ecological Footprint is comprehensive and well-researched. http://www.footprintnetwork.org/gfn_sub.php?content=footprint_overview. Newer ones focus on carbon emissions, such as the Sierra Club's Cool It! Calculator. <http://www.cool-it.us>. The New York Times recommends Zerofootprint as a more accurate and advanced calculator of personal consumption habits. <http://www.zerofootprint.net/calculators>.

Leadership Acterra, an environmental non-profit based in Palo Alto, offers a year-long environmental leadership curriculum called "Be the Change," intended to develop more leaders in the business, government and nonprofit sectors. The program starts in September, with applications due by the end of June each year. <http://www.acterra.org/leadership/index.html>.

Neighborhood groups

Acterra, a Palo Alto-based nonprofit, sponsors and administers the **Green Team Project**, which provides neighborhood groups a structured, supported way to reduce household energy and water use, reduce waste and the use of chemicals, and choose more environmentally-friendly transportation options. Measurements are taken to quantify the positive impact of Green Team member actions. Program information and additional resources are available at <http://www.acterra.org/greenteams/index.html>.

The **Neighborhood Climate Council Program** is another neighborhood group program for individuals who want to reduce their impact on climate. Monthly topics are archived. <http://climlead.uoregon.edu/programs/neighborhood.html#goals>.

Eco-Teams are similar to the Green Team Project, and have been used effectively in Portland OR, Santa Monica and many other areas. <http://www.empowermentinstitute.net/files/SLP.html>.

Workbook Based on the material developed for Eco-Teams, the Low-Carbon Diet is an easy-to-read workbook designed to help individuals and households reduce their environmental impact. Bulk purchase discounts are available. <http://www.empowermentinstitute.net/lcd/index.html>.

Energy Efficiency

EQUIPMENT / APPLIANCES

Refrigeration A new product can reduce the energy used by commercial and industrial refrigeration equipment by 20-30%. Called eCube and sold for approximately \$50 in the UK. The hockey puck-sized device triggers cooling cycles based on the temperature of the items stored in the cooler, rather than its air temperature. White paper at: http://www.fypower.org/pdf/eCube_WhitePaper.pdf; company website at <http://www.ecubedistribution.com/>.

LIGHTING

Energy saving lighting options The Monterey Regional Energy Plan gives a brief description of various kinds of energy efficient lights in its Appendix F, at <http://www.ccag.ca.gov/pdf/USTF/docs/AMBAGAppendicesApr06.pdf> (p. A-12).

Compact Fluorescent Lights Environmental Defense offers a comprehensive buying guide for the “best” CFLs and LEDs. <http://www.environmentaldefense.org/go/cflguide>.

Interior lighting

The **Right Lights** program provides free assessment and discounted lighting upgrades for San Mateo County businesses. <http://www.rightlights.org/index.html>.

Long lasting fluorescent lamps The Sylvania Icetron has an average life of 100,000 hours, making it an attractive option for difficult-to-replace installations. <http://www.sylvania.com/BusinessProducts/LightingForBusiness/Products/Lamps/Fluorescent/Icetron/>. The LED Folio TiLux uses 45 percent less power than two T8 lamps, is dimmable and recyclable. It contains no mercury. http://www.ledfolio.com/inc.php?inc=pro_tilux.

Street lighting A comparison of different kinds of street lights and case studies are discussed in the National Capital Climate Protection Manual for Cities, at

http://www.climatemanual.org/Cities/Chapter5/BestBets/CPM_Chapter5_LocalActionPlan_BestBets_In frastructure.htm#hesl.

Traffic signals Basic facts and case studies about why LEDs are superior are the best choice for traffic lights can be found in the Natural Capital Climate Protection Manual, http://www.climatemanual.org/Cities/Chapter5/BestBets/CPM_Chapter5_LocalActionPlan_BestBets_In frastructure.htm.

MANAGEMENT SYSTEMS

Energy Management Systems

Utility Management Systems

ORDINANCES

See Ordinances & Policy section.

SERVICES

ABAG Energy Watch A partnership of the Association of Bay Area Governments (ABAG) and PG&E, and funded by public goods charges paid by rate-payers, the Energy Watch program offers a wide array of free consulting services to help local governments identify and implement energy efficiency measures. Services are available throughout the 9-county Bay Area on a first-come, first-served basis. They can include energy assessments, project prioritization, identification of funding options, hands-on technical assistance, aid in crafting policies and updating general plans and developing climate protection plans. More info at: <http://www.abag.ca.gov/abagenergywatch/about.html> (general) and <http://www.abag.ca.gov/abagenergywatch/services.html> (services)

Energy Service Companies (ESCOs) Private businesses that specialize in energy retrofits, ESCOs typically audit a facility, recommend and then pay for energy- efficient upgrades under a contract with the building owner. Both parties benefit financially - the owner via lower bills and no upfront costs, and the ESCO by sharing in the energy savings.

SVLG/SSV/QuEST Energy Watch funding and services are available for Silicon Valley Leadership Group and Sustainable Silicon Valley members, both businesses and local governments. Technical services are provided by QuEST. Call SVLG or SSV for more info.

TECHNICAL ASSISTANCE

CEC Energy Partnership Program (EPP) Technical Assistance Free guidance to cities, counties, special districts, hospitals, colleges and public care facilities on ways to increase energy efficiency in existing buildings and new construction, as well as financing options. An application, relevant energy usage data and a resolution are required. Details at: <http://www.energy.ca.gov/efficiency/partnership/>.

CEC Guide to Preparing Feasibility Studies for Energy Efficiency Projects A 183-page how-to and reference guide for identifying and evaluating energy-saving projects in government facilities. Published in 2000, it includes detailed comparative data (energy use and life cycle-costs) for many types of equipment. Document at: http://www.energy.ca.gov/reports/2000-03-20_400-00-002.PDF

WATER AND WASTEWATER PROCESSING

Water Treatment The Agricultural Pumping Efficiency Program (APEP) offers free services to local governments to improve the energy efficiency of water pumps and irrigation systems, such as those used in parks and playing fields. This program focuses on energy efficiency, not on the amount of water used in such systems; see the resources listed under Water Conservation to save both water and energy. More info at: <http://www.pumpefficiency.org/>

Wastewater Treatment The California Wastewater Process Optimization Program (CalPOP) provides free services to local governments to help them reduce energy use in wastewater treatment facilities. Free audits, financial incentives for system upgrades and help establishing a co-generation are available. This program focuses on energy efficiency, not on the amount of water used in such systems; see the resources listed under Water Conservation to save both water and energy. More info at: <http://www.calwastewater.com/>.

Financing/ Funding Sources

OVERVIEW

The California Local Energy Efficiency Program provides an excellent overview of many funding resources on pp. 19-23 of the Workbook, Appendix B, at <http://www.caleep.org/docs/workbook/CALeep%20Workbook%20Appendix%20B%20Resources%20Final%20050106.pdf>. The sources that have been used most often by San Mateo County and neighboring jurisdictions are described in more detail below.

ALTERNATIVE ENERGY

California Solar Initiative (CSI) CSI is a \$3 billion, long-term solar incentive program that will supplant the Self Generation Incentive Program (see below) and is intended to enable the solar industry to become self-sustaining. Rebates will decline over time as specific milestones in solar generation capacity are met. For governments, rebates start at \$3.25 per watt for a small system's estimated output (small is <1 megawatt) and drop over time to \$.70 per watt. Rebates on small systems will be paid upfront. Large systems (> 1 megawatt) will receive ongoing rebates of \$.50 per kilowatt hour (declining to \$.10 per kilowatt hour), based on actual system output. More info at: <http://www.pge.com/csi>.

California Solar Communities Program A Joint Powers Authority, California Communities has structured a power purchase agreement program to offer local governments a low-cost way to fund a photovoltaic system. The for-profit partner (PowerLight) installs and manages the ~50 kW system, charging the local government a one-time fee for the projected energy to be produced over a 25-year term, thereby locking in the price of energy. The government funds the payment through a lease/leaseback arrangement with the JPA of unrelated government property. More info at: <https://cscda.cacommunities.org/apps/?app=19>

Find Solar Good introductory overview of the financial elements involved in acquiring a solar system and financing options for consumers. Not detailed, but has a solid set of links to other websites. More info at: <http://www.findsolar.com/index.php?page=rightforme&subpage=finance>

PG&E's Self Generation Incentive Program Per-watt incentives are available in 2007 for renewable fuel cells (\$4.50/W), non-renewable fuel cells (\$2.50/W), renewable fuel micro-turbines and small gas turbines (\$1.30/W), non-renewable and waste gas fuel micro-turbines and small gas turbines (\$.80/W) and non-renewable and waste gas fuel internal combustion engines and large gas turbines (\$.60). In 2008, only fuel cells and wind turbines will be eligible, unless new legislation is passed. More info at: <http://www.pge.com/selfgen/>

Solar City A for-profit company based in Foster City, Solar City offers a 30 percent discount to cities recommending its products and services to city residents. Solar City also offers discounts to neighborhood groups that buy solar systems in bulk. More info at: <http://www.solarcity.com>.

Understanding Financial Analysis Methods for Photovoltaic Systems This site links to many resources that can help a building owner assess the financial impact of installing a solar electric system; it complements a class offered at PG&E's Pacific Energy Center on the topic. http://www.pge.com/education_training/classes/energy_efficiency/resources/Understand_finance_PV_resourceS07.pdf.

BONDS

Cities can issue bonds to cover the cost of capital improvements, offering low rates and long-term repayment schedules. The administrative costs make them suitable mostly for large projects. The **Community Energy Authority** has the authority to issue bonds... (need more)

DEMAND RESPONSE RATES

PG&E offers lower rates to customers who are willing to cut their demand during peak periods. Several options are available; savings can be up to __%. http://www.pge.com/biz/demand_response/.

ENERGY EFFICIENCY

California Energy Commission (CEC) Energy Efficiency Financing Program

<http://www.energy.ca.gov/efficiency/financing/>

Bright Schools Program Up to \$20,000 of energy efficiency consulting services is available to a school district for both new and existing schools. An application and historical information must be submitted. <http://www.energy.ca.gov/efficiency/brightschoools/index.html>.

Savegas.com A for-profit company enables the owners of apartment buildings and hotels save on utility bills by optimizing their use of natural gas to heat water. Hot water usage is tracked via the Internet, so hot water is available when needed but not kept hot 24/7. More info:

<http://www.savegas.com/Index.htm>

FINANCIAL ANALYSIS TOOLS

GENERAL PURPOSE FUNDS

Revenue Recovery A for-profit company that works with governments, businesses and nonprofits to identify and recover any overpayments on utility bills. Approximately 90% of entities have overpaid in one or more of the following categories: gas, electric, water, telecom (local and long distance land lines, cell, pagers, equipment, service contracts, internet service) and waste disposal. The company does not charge for its services, but keeps 50% of the savings or refunds discovered. In other words, if there are no refunds or future savings, there is no fee. (They also audit workers compensation claims.) Contact: Torri Stewart, 661.345.6070, revenuerecovery@gmail.com.

NEW CONSTRUCTION

PG&E PG&E offers \$400 per unit (\$800 for inland areas) for **new single family homes** built according to the *Energy Star Performance Method* (15 percent more efficient than Title 24 requirements). Builders must apply and be accepted to the program.

http://www.pge.com/res/energy_tools_resources/efficient_new_homes/info_for_builders/

In the alternative, new home builders can use the *Prescriptive Method* to qualify for financial incentives for specific energy efficient **equipment and lighting**.

http://www.pge.com/res/energy_tools_resources/efficient_new_homes/info_for_builders/rnc_pc.html

The **New Solar Homes Partnership** program offers cash to builders of new homes offering solar electric systems. New homes that exceed Title 24 requirements by 15 percent or more can get a \$2.50/watt rebate (which will decrease over time). New homes that exceed Title 24 by 35 percent or more can get a \$2000 rebate on top of the \$2.50 per watt rebate.

http://www.pge.com/res/energy_tools_resources/efficient_new_homes/info_for_builders/rnc_nshp.html

The California **Multifamily New Homes** Program offers design assistance and cash incentives of up to \$270/unit to builders developing new multifamily properties that exceed Title 24 requirements by 15 percent. Appliance and lighting incentives are also offered, and other funding sources may be available through the program. <http://www.h-m-g.com/multifamily/cmfnh/default.htm>

REBATES

PG&E Check <http://www.pge.com> for rebates and other financial incentives for individuals, small business, large business and government agencies. Targeted rebates apply to specific industries and types of equipment.

Flex Your Power The website lists rebates and other financial incentives for residential, commercial and institutional customers, searchable by zipcode. <http://www.flexyourpower.org>.

REVOLVING FUNDS

Ann Arbor Michigan's \$100,000 fund became self-sustaining in eight years. The website identifies two components critical to the program's success: an initial funding source (available for 3-5 years) and a manager assigned to support and coordinate the fund and its projects. See <http://www.a2gov.org/PublicServices/SystemsPlanning/Energy/EnergyFund.html>

Green Building

DESIGN ASSISTANCE /REVIEW

Energy Design Resources A web-based clearinghouse for information about energy-efficient design, including guidelines, case studies, design briefs (whitepapers), codes, specs, financial analysis and more. More info at: <http://www.energydesignresources.com/>

PG&E's Savings By Design For new construction: PG&E provides advice and rebates for energy-efficient designs. More info at: <http://www.savingsbydesign.com/overview.htm>.

Review of designs for new city facilities or private structures for energy and water efficiency. (Examples: Berkeley's Better Builders, Sonoma)

LEED PROJECT TRACKING

Greenprint is an online project management tool for government agencies and other organizations that are managing multiple LEED projects. It can be used to list projects, track progress on LEED points, evaluate environmental and financial benefits based on the LEED points attained and generate reports. <http://www.sfgreenprint.org/>

ORDINANCES & POLICIES

See Ordinances & Policies section.

RATING SYSTEMS

San Mateo Countywide Guide to Sustainable Buildings (with checklist) A local committee of architects, builders and government agency staff developed a guide specifically for San Mateo County with 75 items to consider for new construction and/or remodels. The guidelines are voluntary. <http://www.recycleworks.org/pdf/GB-guide-2-23.pdf>.

Green Point Rating System Build It Green developed and administers a voluntary program that awards points for energy efficiency, water conservation, indoor air quality, etc. The homeowner or builder's claims are verified by an independent inspector before the designation can be claimed. The program currently applies only to new residential construction, though will expand to include residential remodels in late 2007. <http://www.builditgreen.org/greenpointrated/>.

Leadership in Energy and Environmental Design (LEED) Rating System The most widely-adopted rating system allocates points to buildings that demonstrate superior environmental design in five areas: energy efficiency, water conservation, materials, site issues, indoor air quality and innovative design. Buildings must be reviewed and approved by the USGBC before claiming the designation of Certified, Silver, Gold or Platinum. http://www.usgbc.org/LEED/LEED_main.asp.

Green Building Initiative Life Cycle Assessment Calculator [description, including availability]

http://www.thegbi.org/gbi/news_022607_LCATool.asp.

TECHNICAL ASSISTANCE

AccessGreen Directory An online, searchable listing of green building products and services throughout the 9-county Bay Area. Listings meet specific criteria for energy and resource efficiency. <http://www.builditgreen.org/guide/>

Ask An Expert A toll-free hotline and email service run by Build It Green, AAE provides answers to questions about green building from anyone in the 9-county Bay Area. More info at: <http://greenresourcecenter.org/AskAnExpert.php>.

Design Specifications for Energy and Resource Efficiency Published by the Public Interest Energy Research (PIER) Program in 2004, the 431-page document provides detailed specifications for architects, engineers and lighting designers trying to optimize a building's energy efficiency. http://www.energy.ca.gov/reports/2004-05-24_500-04-015_A1.PDF.

Industry-Specific

ALL

Cal-Arch Lawrence Berkeley Labs developed a benchmarking tool for California buildings, allowing building owners to compare their building's energy efficiency with others of its type (food service, health care, lodging, retail, etc.) in its area. <http://poet.lbl.gov/cval-arch>.

EPEAT The Electronic Product Assessment Tool identifies environmentally preferable laptops and desktop computers and monitors. <http://www.epeat.net>.

BUILDERS/DEVELOPERS

Energy-efficiency incentives Builders of new homes can recoup the cost of making energy-efficient new homes (single or multifamily) under several programs administered by PG&E. See details in the Financing/Funding Sources section of this Appendix.

Solar electric incentives Builders of new homes can receive a financial incentive of up to \$2.50/watt for offering solar electric systems on new homes. See details in the Financing/Funding Sources section of this Appendix.

GREEN BUSINESS GROUPS

BALLE (Business Alliance for Local, Living Economies)

BC3 (Business Council on Climate Change – see Organizations > Climate Protection)

Sustainable Business Alliance

HOTELS

California Green Lodging Program The California Integrated Waste Management Board runs a program that provides resources for hotels that reduce their waste, energy and water footprints, and encourages travelers to seek out “green hotels.” Resources for hotel operators are found at: <http://www.ciwmb.ca.gov/epp/GreenLodging/Hotels/>.

eCube – see Energy > EQUIPMENT

Green Hotel Initiative Ceres, the national nonprofit that promotes corporate social responsibility, has a national program for hotels that use environmental practices. Tools and additional information are provided at: <http://www.ceres.org/industryprograms/ghi.php>.

Peninsula Hotel Nonprofit Collaborative This program enables hotels to reduce their waste stream by donating their still-usable discards (furniture, linens, etc.) to local nonprofits. http://www.recycleworks.org/pdf/060330_PHNCflyer.pdf.

MULTIFAMILY PROPERTIES/ RESIDENTIAL PROPERTY MANAGEMENT

PG&E Rebates are available for residential building owners that invest in energy efficient appliances, HVAC equipment, building envelope, lighting and pool equipment for multifamily properties. http://www.pge.com/res/rebates/lighting/multi_family_properties/

OFFICE SPACE/ COMMERCIAL PROPERTY MANAGEMENT

BOMA BOMA works with building owners, managers and tenants to make offices and multi-family buildings more sustainable. The San Francisco office is eager to partner with local governments in the county on increase energy efficiency, water conservation, recycling and water reduction programs. It will extend its annual EarthAwards program to include San Mateo County buildings in 2008. <http://www.bomasf.org/beep.html>.

Lighting The Right Lights program offers free assessments and discounts on lighting upgrades for local businesses. <http://www.rightlights.org/index.html>.

Retrocommissioning Free services are available to optimize building performance, increase energy efficiency and occupant comfort. Criteria: buildings with more than 100,000 sq ft of conditioned space, direct digital controls, central mechanical equipment in good working order, commitment to taking action on recommendations within a year. <http://www.rcx-program.com/index.html>.

RESTAURANTS

Green Business Certification Program

eCube - see Energy > EQUIPMENT

SMALL BUSINESS

Small Business Energy Alliance The for-profit SBEA administers an Energy Savers program for small businesses, property managers, wineries and local agencies in Lake, Marin, Mendocino, Napa, Solano and Sonoma counties. <http://www.sbeaonline.com/index.php>

Jobs

Apollo Alliance Named after the space program, Apollo is a national organization advocating the development of clean energy and 3 million new green jobs. Oakland has partnered with Apollo to create a Green Jobs Corps. <http://www.apolloalliance.org/>.

Ordinances & Policies

CONDITIONS OF APPROVAL

Conditions of Approval can be used to advance green building and energy conservation efforts. They generally stipulate that certain requirements must be met in order for the permit to be approved. Conditions of Approval can be mandated through a city council resolution or ordinance. Some examples include:

- submitting a green building checklist with permit application
- meeting with a green building consultant during the design phase of a project

DEVELOPMENT AGREEMENTS

A development agreement is reached between the planning department of a city and a developer or business on a case-by-case basis. Development agreements can be used to encourage green building, energy efficiency and/or water conservation efforts, often using the incentives listed below.

GENERAL PLAN

The General Plan provides the direction and support for local energy initiatives. Energy and water conservation can be addressed within the mandatory seven elements (land use, circulation, housing, conservation, open space, noise and safety) and/or within separate elements.

Resources

Local Government Energy Efficiency Report: General Plan Policy Options for Energy Efficiency in New and Existing Developments The report includes ideas for policies, programs and actions with sample General Plan language from California cities and counties, as well as additional resources for each policy idea. www.redwoodenergy.org/uploads/Energy_Element_Report.pdf.

Monterey Bay Regional Energy Plan Appendix E of the 2006 report provides concise descriptions and examples of how to incorporate energy considerations into General Plan elements. www.ccaq.ca.gov/pdf/USTF/docs/AMBAGAppendicesApr06.pdf.

The California Planners' Book of Lists This is a log of all the cities within California that have addressed water and energy in their General Plans. <http://www.calpin.ca.gov/Archives/Default.asp>.

ABAG Energy Watch Energy Watch offers a package of energy ordinances and other policies. Descriptions are at <http://www.abag.ca.gov/abagenergywatch/services.html>.

Examples

City of Palo Alto The General Plan (called a Comprehensive Plan) has an Energy Element as a sub-section of the Natural Environment Chapter. This section lays out policies and programs related to maintaining the city's energy supply and using renewable resources. <http://www.city.palo-alto.ca.us/compplan/natural.html>.

Humboldt County The Energy Element provides a comprehensive discussion of its history and how it relates to other General Plan elements. www.redwoodenergy.org/uploads/Energy%20Element%20-%20Final.pdf.

San Mateo County The County's General Plan calls for the promotion of energy conservation and sustainable building practices and improved energy efficiency in new homes. **Need link**.

INCENTIVES

Incentives can be offered by a city, public utility or enforcing agency to both encourage and reward resource conservation efforts. Common incentives for energy efficiency and green building measures are:

- priority/expedited permitting and design review processing
- refunds on plan check fee (or a portion of the fee)
- increased Floor Area Ratio (FAR) or density allowances
- reduced parking requirements

PG&E and local water agencies also have specific incentive programs that can work in conjunction with green building and conservation programs. See Financing/Funding Sources > New Construction and ... (need water ref).

Examples

City of Sunnyvale adopted an ordinance that allows a five percent FAR for buildings located in the industrial zoning districts when the building is designed and submitted for LEED certification. <http://sunnyvale.ca.gov/City+Council/Council+Meetings/2004/2004March/Reports/2744-04.htm>.

City and County of San Francisco offers an expedited permitting process with the Planning Department, Department of Building Inspection and Department of Public Works for projects that are designed to meet or exceed a LEED Gold standard. http://www.sfenvironment.org/our_programs/topics.html?ssi=8&ti=19.

ORDINANCES

Energy Efficiency An energy efficiency ordinance requires the use of specific energy conservation measures in new construction, additions or remodels to reduce the total energy use to a percentage below the Title 24 standards (typically 10-15 percent). An energy ordinance can also be applied at the time of sale or transfer and normally requires a certain percentage of the total sales price or cost of remodel to be invested in specific energy efficiency retrofits.

The California Energy Commission must approve any energy ordinance that exceeds Title 24, and requires a study demonstrating that the ordinance is cost-effective. The CEC maintains a log of cities that have implemented ordinances that exceed the Title 24 building standards. http://www.energy.ca.gov/title24/2005standards/ordinances_exceeding_2005_building_standards.html.

Energy Efficiency Ordinance Examples

Los Altos Hills The Energy Efficiency Standards for Single-Family Dwellings requires energy consumption 15 percent lower than allowed by Title 24, and provides for multiple approaches for meeting performance requirements. www.energy.ca.gov/title24/2005standards/ordinances/2006-12-20_LOS_ALTOS_HILLS.PDF.

Marin County The Single Family Dwelling Ordinance applies to homes with more than 3,500 square feet of conditioned space and additions greater than or equal to 500 square feet, when total conditioned area is more than 3,500 square feet. The ordinance requires that homes over 3,500 square feet use no more energy than a 3,500 square foot home. Covered projects must submit Title 24 reports and the

Marin County Energy Form and Worksheet.

<http://www.co.marin.ca.us/depts/CD/main/comdev/advance/best/dwelling.cfm>.

San Francisco The Residential Energy Conservation Ordinance (RECO) applies to all single- and two-family housing units, apartments and residential hotels. It includes standards for toilets, showerheads, faucet aerators, water heater blankets, pipe insulation and exterior door weather-stripping. The ordinance is enforced at time of sale, metering conversion, major improvements or condominium conversion. There is a cap on the amount of money that must be spent to bring housing into RECO compliance. www.sfgov.org/site/uploadedfiles/dbi/Key_Information/ResidEnergyConsOrd1006.pdf.

Green Building A green building ordinance is similar to an energy efficiency ordinance but usually addresses broader elements (such as the site, water use and choice of materials). It normally targets new construction, but can also be applied to additions, remodels and swimming pools. The requirements can be defined in the ordinance or refer to another set of standards, such as the USGBC LEED rating system or Build It Green's GreenPoint rating system. A green building ordinance usually stipulates an applicable square footage threshold.

Green Building Resources

Build it Green Toolkit The BIG Public Agency Council (PAC) Public Agency Implementation Toolkit contains model resolutions, model staff reports, presentations, Build It Green's guidelines and checklists, current legislation information and forthcoming links to city policies. It is available only to members. <http://www.builditgreen.org/guild/index.cfm?fuseaction=agencies>.

Build It Green City Roadmap for Creating a Green Building Program The roadmap provides a framework and step-by-step process to assist California municipalities in developing a residential green building initiative. www.ccag.ca.gov/pdf/USTF/reports/Roadmap6.5.06.pdf.

Silicon Valley Leadership Group Green Building Initiative SVLG has created a Green Building Initiative to work with local governments on creating municipal standards and practices for green building. The goal is to assist governments to draft green building policies that provide flexibility and incentives important to the private sector while increasing the readiness to respond to future regulations. <http://www.svlq.net/campaigns/cleanandgreen/>.

Green Building Ordinance Examples

Alameda County Stopwaste (the waste management joint powers authority for the county) lists jurisdictions in Alameda County that have adopted green building policies or ordinances. <http://www.stopwaste.org/home/index.asp?page=492>.

The **Alameda County Stopwaste model ordinance** for cities uses the LEED standard. http://www.stopwaste.org/docs/final_model_civic_gbo.doc

City of Rohnert Park Green Building Ordinance The ordinance applies to: new single-family and multi-family dwellings; single-family dwelling additions; multi-family dwelling remodels; commercial tenant improvements, and new commercial, mixed-use and city-sponsored buildings. The ordinance applies specific green building guidelines for each building type and sets compliance thresholds based on density, number of dwelling units or floor area ratio (FAR). Rohnert Park implemented an Energy Efficiency Ordinance as a preliminary step to creating its Green Building Ordinance. The mandatory

green building guidelines require energy efficiency measures above Title 24.

<http://www.rpcity.org/content/view/468/1/>.

Water Conservation

AB 1881 requires all cities and counties to adopt an **updated landscape ordinance** before Jan. 1, 2010. The new ordinance is likely to require more smart irrigation controls, separately metered irrigation lines, recycled water, stormwater and water-frugal landscaping.

<http://www.hansonbridgett.com/newsletters/PubAgencyAdvisory/PAadvisoryFeb07.html>.

POLICIES

Overviews

The **California Local Energy Efficiency Program** provides sample resolutions and policy initiatives in the Workbook, Appendix B, pp. 2-4 and 11-18.

<http://www.caleep.org/docs/workbook/CALeep%20Workbook%20Appendix%20B%20Resources%20Final%20050106.pdf>. Policy tools and options are also listed on p. 28 of the Summit findings document:

<http://www.caleep.com/docs/CaliforniaLeep-SummitProceedings-May2004-FINAL.pdf>.

Build It Green More examples of policies are listed in BIG's 2006 report on **Local Green Building Initiatives in Northern California**, at www.ccag.ca.gov/pdf/USTF/reports/PACSurvey03.06.pdf.

SVLG Policy Green Building Workshop Materials from a June 2007 workshop are available at

<http://www.svlq.net/events/gbpolicy0627/ppt/index.php>.

Examples

San Mateo County Sustainable Building Policy The policy, adopted in 2001, requires all new County buildings of more than 5000 sq ft to meet the highest practicable LEED standard.

http://www.recycleworks.org/greenbuilding/sus_building_policy.html.

RESOLUTIONS

Like ordinances, resolutions are legislative documents that must be approved by the city council. Resolutions, however, are more easily changed and updated because they don't require the extent of approval of an ordinance. Resolutions are used to set goals, to enact energy efficiency programs/projects and to recommend voluntary compliance with energy efficiency and/or green building standards. Resolutions can also be used in conjunction with ordinances to mandate green building programs. For example, an ordinance can mandate that a city will have a green building program and for what type of structures, while the resolution dictates the thresholds and compliance standards. This allows a city to easily adapt when federal and/or state laws change, technology improves and/or compliance standards are updated.

Examples

City of Oakland Oakland adopted green building standards as official city reference documents.

<http://clerkwebsvr1.oaklandnet.com/attachments/13518.pdf>.

Rohnert Park Rohnert Park uses a combination of ordinances and resolutions in its Green Building program. <http://www.rpcity.org/content/view/468/183/>.

Organizations

Acterra A Palo-Alto based environmental nonprofit, Acterra sponsors the Green Team Project (see Education > NEIGHBORHOOD ORGANIZATIONS > Green Team Project), “Be the Change” environmental leadership training (see Education > PUBLIC EDUCATION & OUTREACH > Leadership > Acterra) and annual awards for sustainability. <http://www.acterra.org>.

Bay Area Alliance for Sustainable Communities The 10-year old nonprofit brings together business, government, nonprofit and environmental leaders to improve the quality of life in the 9-county Bay Area. <http://www.bayareaalliance.org/>.

Build It Green (BIG) A Bay Area-based nonprofit organization whose mission is to expand the market for healthy, durable, energy and resource-efficient housing. BIG provides professional training and certification, convenes a Public Agency Council to share best practices and model policies, advocates at the state level, and administers the “Green-Point Rated” system for new residential construction. More info at: www.builditgreen.org

Business Council on Climate Change (BC3) Sponsored by the UN Global Compact, the San Francisco Department of the Environment and the Bay Area Council, this coalition plans to offer support and tools to businesses ready to reduce their carbon footprint. <http://www.bc3.cc>

ICLEI--Local Governments for Sustainability is an international nonprofit focused on sustainable development and climate protection. It offers technical services, consulting, training, emissions inventory software and a network of almost 500 cities across the globe that share information and experiences. Membership fees are based on a city’s population, ranging from \$600 to \$8000.¹ Joint Venture Silicon Valley Network is working with ICLEI to try to find a way to help all cities in San Mateo and Santa Clara County to join the group. <http://www.iclei.org/index.php?id=391> (US office, based in Oakland).

Joint Venture Silicon Valley Network (JVSVN) Joint Venture analyzes and takes action on issues affecting the economic vitality and quality of life of the region. It is starting a Climate Protection Task Force of senior city staffers in San Mateo, Santa Clara and southern Alameda Counties; the task force will work collaboratively to analyze and specify climate protection solutions. The goal is to lower costs and speed up deployment of programs and technologies to reduce lower greenhouse gas emissions in the area. <http://www.jointventure.org/index.html>

¹ For cities in San Mateo County, the relevant ICLEI membership dues are \$600 for cities with 1-50,000 residents and \$1200 for cities with 50,001-100,000 residents.

Local Government Commission The LGC is a nonprofit based in Sacramento that aids elected officials in establishing livable, sustainable cities. Its Local Government Sustainable Energy Coalition (LGSEC) will be a central resource for California public agencies to learn and share information about energy issues. http://www.lgc.org/freepub/energy/newsletter/mar_apr2007/page01.html.

RecycleWorks A countywide clearinghouse for information on recycling, composting, waste reduction, green building, climate protection and sustainability generally, RecycleWorks has a website and hotline, hosts brownbag lectures and tours, runs programs, publishes brochures and more. <http://www.recycleworks.org>.

Sierra Club The Sierra Club is the nation's oldest and largest environmental nonprofit. <http://www.sierraclub.org>. Among its efforts to combat global warming is the Cool Cities project, which is aligned with the US Mayors Climate Protection Agreement. Cool Cities promotes three main strategies: green vehicle fleets, energy efficiency and renewable energy. San Mateo, San Bruno and several other Bay Area cities have signed up. <http://www.coolcities.us/>.

Silicon Valley Leadership Group SVLG convenes business and government leaders to address policy issues affecting the quality of life and economic health of Silicon Valley. <http://www.svlq.org/>. The Clean and Green Energy Action plan includes multiple initiatives to lower the region's greenhouse gas emissions, such as the "Cool Commutes" competition for local employers, advocacy for improved transit options, demonstration projects and a green building initiative for cities. <http://www.svlq.net/campaigns/cleanandgreen/>

Sustainable San Mateo County The nonprofit publishes an annual report on sustainability indicators, presents annual sustainability awards and, in conjunction with RecycleWorks and the local chapter of the AIA, a green building award. <http://www.sustainablesanmateo.org/>.

Sustainable Silicon Valley (SSV) Started in 2001 by the Silicon Valley Leadership Group, California EPA and environmental nonprofits, SSV urges its members from the business, governmental and nonprofit sectors to reduce CO₂ emissions 20% below 1990 levels by 2010. SSV sponsors educational and information-sharing forums and publishes a report of its members' emissions reductions. Educational forum materials are available in the Archives section of the site. Annual membership fees are \$1000 for cities. San Mateo County and Portola Valley are members of SSV. <http://www.sustainablesiliconvalley.org/>

US Green Building Council (USGBC) A national nonprofit coalition of builders, manufacturers, architects, public agencies and others, it focuses on improving the environmental performance of the built environment. The USGBC provides professional training, research and advocacy, and administers a growing array of Leadership in Energy and Environmental Design rating systems for new construction, existing buildings, core and shell, interiors, as well as special projects like new developments, universities and hospitals. More info at: <http://www.usgbc.org>.

Purchasing

ENVIRONMENTALLY PREFERABLE PURCHASING

Recycled Content The EPA offers ReCon software free of charge to aid purchasers in estimating the lifetime energy and greenhouse gas impacts of materials made with various levels of recycled content. http://epa.gov/climatechange/wycd/waste/calculators/ReCon_home.html

Information Technology equipment

Copiers and printers

Laptops can be up to 5x more energy-efficient than a desktop system

Servers PG&E rebate on Sun energy-efficient systems

Software PG&E rebate on VM Ware virtualization software

POLICIES

Model Policy Alameda County Waste Management Authority

www.ciwmb.ca.gov/epp/LawPolicy/AlaPolicy.doc

PURCHASING POOLS

Governments

Joint Venture Silicon Valley Network The Climate Protection Task Force intends to assess new technologies and aggregate demand to reduce costs, e.g. for solar electric systems.

Neighborhoods

Solar systems Foster City-based Solar City offers discounts of up to 30% when residents in a city band together and purchase at least 175 kW of installed capacity. <http://www.solarcity.com>.

Waste Reduction

AB 939 In 1989, AB 939 established the current organization, structure and mission of the California Integrated Waste Management Board (CIWMB). It directed attention to the increasing waste stream and decreasing landfill capacity, and mandated a reduction in waste disposal. Jurisdictions were required to meet diversion goals of 25% by 1995 and 50% by the year 2000. More at: <http://www.recycleworks.org/ab939.html>

REDUCE Be a smart buyer and push the manufacturers to consider changes in their packaging, or just buy fewer items that will ultimately end up in the trash. More at: <http://www.ciwmb.ca.gov/Reduce/>.

REUSE When you think something you own has lived its useful life, consider alternatives to discarding it in the trash. Maybe someone else could use it or you could find a different use for the item. More at: <http://www.ciwmb.ca.gov/Reuse/>.

REPAIR Consider repairing your used items rather than throwing them away. Often people discard used items that have minor repairs required to be useful again. Spend a little time making a repair and benefit from the savings.

RECYCLE Look to the following websites to find out more about recycling.
<http://www.ciwmb.ca.gov/Recycle/> and <http://www.recycleworks.org/index.html>.

Contact your local hauling company to find out what specific programs they have to support your recycling needs.

Community Wishlist Matches people or organizations with items to donate and local nonprofits that seek them.

<http://communitywishlist.org/index.php>.

ROT Rot means composting. Much of the county does not have access to yard waste collection and must depend on local or backyard composting options. More at:
<http://www.recycleworks.org/compost/index.html>

RESPECT Teach or promote respect for items we use in our lives. The things we break that can't be reused, recycled, repaired or rotted will end up in the landfill.

CALCULATING GHG REDUCTIONS The US EPA offers a calculator to estimate the reduction in greenhouse gas emissions corresponding to specific waste diversion efforts.
http://epa.gov/climatechange/wycd/waste/calculators/Warm_Form.html

Water Conservation

Bay Area Water Supply and Conservation Agency (BAWSA) <http://www.bawsca.org/conserve.html>.

COMMERCIAL EQUIPMENT

Cooling towers

Food steamers

Dishwashers

HVAC

Ice machines

Laundry

Spray hose/valve

FIXTURES

Toilets Some cities provide financial support to residents to upgrade to ultra low flow/high-efficiency toilets, which can save 20 percent or more water per flush.

Urinals High-efficiency urinals can save ____ gallons per use.

Washing machines The Residential Rebate Program offered by many Bay Area water agencies gives rebates of \$50-\$200. <http://www.conservationrebates.com/programs/wat/ClotheswasherRebate.aspx>

GREYWATER/ REUSE

Greywater (or graywater) is water that has been used for household washing. It is generally combined with blackwater (wastewater from toilets) and sent through sewer lines to be treated. But because greywater has less nitrogen and fewer pathogens than blackwater, it can be captured and reused for landscaping or toilet-flushing to reduce the use of potable water. Outdoor-use greywater systems are legal in Arizona and New Mexico and permitted under limited circumstances in Berkeley and Oakland. During the Bay Area's last drought, non-permitted, low-tech greywater systems (a garden hose carrying washing machine discharge to a garden) were common.

The **AQUS Watersaver** captures sink water and uses it to flush toilets. It may be eligible for 1-2 points under the LEED rating system. <http://www.watersavertech.com/AQUS-Diagram.html>.

LANDSCAPING

Artificial turf can dramatically decrease maintenance costs and increase revenues from playing fields, and lower pesticide use as well.

Guidelines

Bay-Friendly Landscape Guidelines were developed by Stopwaste.org in Alameda County, and will in 2006-2007 be adopted by a regional coalition. Separate guidelines exist for professional landscapers

and homeowners, with a shared emphasis on reducing the use of water and chemicals in commercial and residential landscaping. More info at: <http://www.stopwaste.org/home/index.asp?page=141>.

Sustainable Gardening Guidelines The RecycleWorks website provides info on healthy gardening techniques, composting, workshops and events.
http://www.recycleworks.org/compost/sustainable_gardening.html.

Irrigation (weather station)

Ordinances See Ordinances and Policies

WATER RATES